

Date: Tue, 21 Jun 94 04:30:21 PDT  
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>  
Errors-To: Ham-Ant-Errors@UCSD.Edu  
Reply-To: Ham-Ant@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Ant Digest V94 #195  
To: Ham-Ant

Ham-Ant Digest                      Tue, 21 Jun 94                      Volume 94 : Issue 195

Today's Topics:

          Antenne BAZOOKA WaveMaster  
          Comet 2M/440/cellular mobile (2 msgs)  
          Field-Day Yagi  
          Half-wave vertical (2 msgs)  
          Help needed for HF mobiling/KN4EL  
          J-poles yet again.... (June CQ) (2 msgs)

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>  
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: 20 Jun 1994 12:22:27 GMT  
From: ihnp4.ucsd.edu!usc!math.ohio-state.edu!jussieu.fr!Cea.Fr!muguet!  
jcmonier@network.ucsd.edu  
Subject: Antenne BAZOOKA WaveMaster  
To: ham-ant@ucsd.edu

J'ai un ami, n'ayant pas acces aux news, qui m'a demande ceci :

          Quelqu'un connait-il, a-t-il experimente, possede-t-il, une antenne CB pour  
          station fixe BAZOOKA WAVEMASTER.

          C'est une antenne de type 1/2 onde raccourcie qui mesure 90cm et est, d'apres  
          son importateur, pre-reglee pour le 27Mhz avec une bande passante de 240  
canaux.

          Il cherche des renseignements et resultats d'experiemntation au sujet de  
cette

          antenne avant d'en faire l'acquisition (il possede un GALAXIE SATURN)

notamment :

- bande passante
- reception et emission
- probleme de TVI et/ou TPH
- etc...

Merci de repondre par e-mail afin que je puisse transmettre.

73 + 51 a tous.

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      |      " x      . ^
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      j      Y

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DON'T USE DRUGS BUT... USE CONDOMS :-)

MONIER Jean-Christophe  
E-Mail : [jcmonier@muguet.saclay cea.fr](mailto:jcmonier@muguet.saclay cea.fr)

ATHESA France  
Agence C.E.A. - Defense  
BP 28  
91192 GIF SUR YVETTE

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Date: Mon, 20 Jun 1994 13:20:48 GMT  
From: [ihnp4.ucsd.edu!swrinde!emory!rsiatl!ke4zv!gary@network.ucsd.edu](mailto:ihnp4.ucsd.edu!swrinde!emory!rsiatl!ke4zv!gary@network.ucsd.edu)  
Subject: Comet 2M/440/cellular mobile  
To: [ham-ant@ucsd.edu](mailto:ham-ant@ucsd.edu)

In article <BM1TYgr.bobsadur@delphi.com> Robert Sadur <bobsadur@delphi.com> writes:

>I saw Comet has a combination ham and cellular antenna. Does  
>anyone have experience with this? And does anyone know where  
>I can get a triplexer for these bands or a duplexer that would  
>have 2M and 440 on one side, and cellular on the other? It seems  
>strange that Comet doesn't sell such a thing but it seems they don't.

I use the regular Comet 144 Mhz, 440 MHz, 1.2 GHz duplexer. The 1.2 GHz crossover is just below 800 MHz, so it works fine for cellular phones.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
Destructive Testing Systems		we break it.		uunet!rsiatl!ke4zv!gary
534 Shannon Way		Guaranteed!		emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244				

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Date: 20 Jun 1994 20:36:25 GMT  
From: ihnp4.ucsd.edu!usc!elroy.jpl.nasa.gov!wp-sp.nba.trw.com!gatekeeper.esl.com!  
m42012.esl.com!user@network.ucsd.edu  
Subject: Comet 2M/440/cellular mobile  
To: ham-ant@ucsd.edu

In article <BM1TYgr.bobsadur@delphi.com>, Robert Sadur  
<bobsadur@delphi.com> wrote:

> I saw Comet has a combination ham and cellular antenna. Does  
> anyone have experience with this? And does anyone know where  
> I can get a triplexer for these bands or a duplexer that would  
> have 2M and 440 on one side, and cellular on the other? It seems  
> strange that Comet doesn't sell such a thing but it seems they don't.  
> 73  
> Bob Sadur AA2NY

Isn't cellular between 860-900 mhz? I don't remember exactly...

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Date: 20 Jun 94 14:29:00 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: Field-Day Yagi  
To: ham-ant@ucsd.edu

My "elmer" recently unloaded his old Mosely TA-33 Trap Master  
tri-band "beam" on me. The antenna is old but functional. I'd  
like to hear suggestions on using one of these for a field-day  
setup, particularly ideas about getting it up in the air and  
making it stay there :)}

The boom is about 14 feet and the elements around 25 feet. I've  
got a TV-sized rotor or we could use the "armstrong" method to  
turn the thing. I'd appreciate any first-hand experience about  
putting something this size up on a TV mast, flagpole, extension  
ladder, sky-hook, etc.

TNX es 73 de KD1DJ

(hicks.alan@epamail.epa.gov)

-----  
Date: Mon, 20 Jun 1994 13:37:54 GMT  
From: ihnp4.ucsd.edu!swrinde!emory!rsiatl!ke4zv!gary@network.ucsd.edu  
Subject: Half-wave vertical  
To: ham-ant@ucsd.edu

In article <ke4dpx.4.00052524@gregl.slip.iglou.com> ke4dpx@gregl.slip.iglou.com (Greg Law) writes:

>Last winter I decided to install an external antenna so I purchased a fairly  
>inexpensive half-wave vertical. The antenna is basically a half-wave  
>fiberglass whip with a metal cone at the bottom with three fiberglass ground  
>radials. We already had a five-foot mast attached to the chimney of the  
>two-story house with a TV beam at the top of the mast. Considering the current  
>climate, we decided to 'hurry along' the installation so we mounted the  
>antenna along the side of the mast below the TV antenna. This arrangement  
>worked fine for a few months and we recently got around to putting the antenna  
>up the right way in better climate.

>

>Our basic task was to completely remove the TV antenna since it wasn't used  
>and to mount the half-wave to the top of the mast. Having done that, we  
>noticed we lost about 9dB on \*everything\*. A local repeater I can get at S9+60  
>on a rubber duck was suddenly reduced to S9 and a distant repeater that was S3  
>was not even moving the S meter and was very noisy.

Hmmm. 9 db loss, but you lose 60 db compared to a rubber duck on one  
repeater, and 3 S units (18 db) on a distant repeater. This does not  
compute. A side mounted vertical \*is\* directional, and can show a 6 db  
gain in one direction. It can also show a sharp notch in the other direction.  
A vertical antenna mounted in the clear should have an omni pattern. And  
almost \*any\* full size antenna should show substantial gain over a rubber  
dummy load.

>We discussed the problem with various amateurs in the community and one kind  
>sole pointed out that half-wave antennas typically need a very good ground  
>plane and that the three ground radials probably were not sufficient -- hence  
>the signal was probably radiating straight up. We treked back up the roof and  
>installed the TV antenna just below the half-wave and it is now working much  
>better. The local repeaters came back up to S9+60 and the distant repeaters  
>are a hair better than they were before we fiddled with the antenna.

There's something else working here because halfwave verticals \*don't  
require a groundplane at all\*. That's why they're the antennas of choice  
for mounting on non-metallic vehicles, and for through glass antennas.  
Are you \*sure\* this is a halfwave antenna and not a quarterwave antenna?

Quarterwave verticals \*do\* require a good groundplane to function properly.  
A 2 meter halfwave has a vertical element about 38-40 inches long.

Likely what you're actually seeing is mutual coupling between the TV antenna and the vertical such that the gain characteristic of the TV beam is augmenting the vertical in one direction. (2 meters is located between TV channels 6 and 7, so a TV beam will show gain at 2 meters.)

Gary

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--
Gary Coffman KE4ZV          | You make it,      | gatech!wa4mei!ke4zv!gary
Destructive Testing Systems | we break it.     | uunet!rsiatl!ke4zv!gary
534 Shannon Way           | Guaranteed!      | emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244    |                   |
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Date: 20 Jun 1994 18:12:34 GMT  
From: ihnp4.ucsd.edu!news.acns.nwu.edu!casbah.acns.nwu.edu!rdewan@network.ucsd.edu  
Subject: Half-wave vertical  
To: ham-ant@ucsd.edu

In article <1994Jun20.133754.14207@ke4zv.atl.ga.us>,  
Gary Coffman <gary@ke4zv.atl.ga.us> wrote:

<snip>

>There's something else working here because halfwave verticals \*don't  
>require a groundplane at all\*. That's why they're the antennas of choice  
>for mounting on non-metallic vehicles, and for through glass antennas.  
>Are you \*sure\* this is a halfwave antenna and not a quarterwave antenna?  
>Quarterwave verticals \*do\* require a good groundplane to function properly.  
>A 2 meter halfwave has a vertical element about 38-40 inches long.  
>

Whilst it is true that the return currents are very low for a half wave vertical that is voltage fed, the vertical does need a good ground for achieving a reasonable launch angle. John Devoldere, ON4UN, in his latest book titled 'Low Band Dxing', compares the gain of a 1/4 wave vertical versus a 1/2 wave voltage fed vertical and finds that over poor and average ground the gain of the 1/2 wave is less than that of a 1/4 wave over a good radial system. In other words, the launch angle of a half wave vertical (same is also true for the 5/8 wave vertical) is affected more by the quality of the ground than is a 1/4 wave vertical with 120 radials each 0.4 wavelength long. He recommends at least thirty 2 wavelength long radials for a half wave antenna. As thumb rule he recommends longer radials for taller antennas.

Rajiv  
aa9ch  
r-dewan@nwu.edu

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Date: 18 Jun 94 17:16:20 -0400  
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!gatech!concert!  
hearst.acc.Virginia.EDU!gems.vcu.edu!gbcarey@network.ucsd.edu  
Subject: Help needed for HF mobiling/KN4EL  
To: ham-ant@ucsd.edu

DE Greg, KN4EL Richmond VA  
I have a few Qs for the experts. I am considering driving to CT to visit  
inlaws (actually looking forward to the drive) and I'd like to do some  
mobile HFing. I've tried using 11m whip tuned with auto ant tuner. However  
if I can have one less piece of hardware on the car floor when I drive, this  
would be nice. I've been looking at ads for the AB4 (Pro AM?) antennas. Has  
anyone ever compared this to whip? What is SWR response like? How is band  
width etc.

Tnx for comments  
Greg GBCAREY@GEMS.VCU>EDU

P.S. I read through radios...cb sometimes and sometimes come across someone  
who swears on their grandma's grave about an Antron 99 antenna which is an  
omni (1/2 wave) but claims to have 9.9dbi of gain. Can these advertisers  
be prosecuted  
for fraud? Maybe this notion is like a parrot grease story I heard one time  
ago on 75m:.

Since parrots have potential to talk, someone decided to look at (study)  
a number of bioorganics from parrot extratc, to determine what  
gave them the ability to speak. To their surprise, parrot oil when  
rubbed on the fingers caused a rapidly fluxing tingle. One of the  
scientists accidentally got some of the compound on his lips and began  
talking so fast that it was hard to understand him unless he was taped  
and the tapes replayed slowly. THEY HAD SOLVED THE PROBLEM

One of the team decides to rub some of the grease on one side of the  
ant. they were using to keep in touch with the base lab. TO his surprise  
the omni only worked when the greased side was pointed to base. Tests w  
were done and amazingly, the ant. had gain and directionality.

They concluded that the special qualities of the parrot grease  
caused the electrons to move faster on the treated side of the vertical  
and thereby causing most of the RF to 'escape' through that side and hence

producing gain from a standard 1/4 wave over ground vertical.

I Think of this story (which) I've embellished ) when I hear of gain figs for some ants.

73/KN4EL.

ee           \$

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Date: 20 Jun 1994 17:21:45 GMT  
From: news2.near.net!info-server.bbn.com!news!levin@yale.arpa  
Subject: J-poles yet again.... (June CQ)  
To: ham-ant@ucsd.edu

I just read Lew McCoy's article in CQ - the latest quick-and-easy J-pole. He reported variable and unreproducible results using twinlead, but he tried using 450 ohm ladderline and was much more impressed by the accuracy of his calculations and the performance of the antenna. I was not attracted to the idea of using twinlead, and I don't have spare lengths of aluminum or copper pipe hanging about, but I do have tens of feet of ladderline hanging about, so I'd like to try this one.

Problem is, he calculated the dimensions using ladderline which has a 3/4-inch separation between the conductors, and mine is one-inch line. I don't have access to ELNEC (which he used) or for that matter any experience using such a program. Can anyone give me an idea what the effect might be of increasing the distance between the conductors by 33%? (I guess I could also write Mr McCoy and ask, too, which I probably will do.)

Thx / JBL

=

Nets: levin@bbn.com		"There were sweetheart roses on Yancey Wilmerding's
POTS: (617)873-3463		bureau that morning. Wide-eyed and distraught, she
KD1ON (@KB4N.NH.USA)		stood with all her faculties rooted to the floor."
		-- S. J. Perelman

-----  
Date: 20 Jun 1994 20:55:13 GMT  
From: ihnp4.ucsd.edu!agate!kennish@network.ucsd.edu  
Subject: J-poles yet again.... (June CQ)  
To: ham-ant@ucsd.edu

In article <LEVIN.94Jun20132145@cassandra.bbn.com>,  
Joel B Levin <levin@bbn.com> wrote:

(stuff deleted)

>

>Problem is, he calculated the dimensions using ladderline which has a  
>3/4-inch separation between the conductors, and mine is one-inch line.  
>I don't have access to ELNEC (which he used) or for that matter any  
>experience using such a program. Can anyone give me an idea what the  
>effect might be of increasing the distance between the conductors by  
>33%? (I guess I could also write Mr McCoy and ask, too, which I  
>probably will do.)

>

> Thx / JBL

Hmm, I can give you the effect on the characteristic impedance as  
a function of spacing. Let's see:

$Z_0 = (\eta/\pi) \operatorname{invcosh}(s/d)$

where  $\eta$  is  $\sqrt{\mu/\epsilon}$  or 377 ohms for air dielectric.

$s$  is the center to center spacing of the conductors

$d$  is the conductor diameter

so, assuming everything is the same except for the spacing, then  
the impedance would go up slightly. A useful approximation is  
that  $\operatorname{invcosh}(x) \approx \ln(2x)$  if  $x \gg 1$ .

-ken

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Date: 20 Jun 1994 12:57:07 GMT

From: newsgate.watson.ibm.com!watnews.watson.ibm.com!vinod@uunet.uu.net

To: ham-ant@ucsd.edu

References <2ts5jl\$fkj@watnews1.watson.ibm.com>,

<1994Jun20.012846.4783@ultb.isc.rit.edu>, <2u3nq9\$caj@sophia.inria.fr>

Reply-To : vinod@watson.ibm.com

Subject : Re: Wanted -- Cheap, easy directional antenna ideas for 2m \*reception\*

Thanks to everyone who responded to my initial post. I apologize  
for not including information about what antenna I am currently using,  
as most of you guessed, it was just the stock rubber duck.

I built the twin-lead J-pole over the weekend, however, I did not  
get much better reception for W1AW. In fact, I could not hear anything with  
both the rubber duck or the twin-lead, although the twin-lead seemed  
to improve some repeaters which I usually hear with trouble. I did



not get around to getting my ladder out so that I can get the antenna hooked up somewhere high. Anyways, the experiment convinced me that I should build a copper tube J-pole to mount somewhere high for my repeater use when the ticket arrives (any day now ..)

I will try to get some height on the antenna as the first experiment. I will also look up the Yagi etc. in the ARRL antenna handbook. It so happens that I have a TV yagi antenna on the roof, which is not being used anymore, so I can replace that with something more useful:-)

By the way, what kind of antenna is the HB9CV?  
Is it in the ARRL handbook also?

Thanks again for all the helpful suggestions.

--

--vinod

email: vinod@watson.ibm.com

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Date: (null)

From: (null)

DIAMOND has the following which should work too:

MX-3000N (high end: 850-1300 mhz)

MX-3000D

MX-3000DN

MX-2000 (high end: 300-950 mhz)

There's also an MX-37N but the specs indicate that the high end is between 900-1300 mhz, so you probably shouldn't get this one. Good luck!

--

Lance Lee, KD6DMR

Sunnyvale, California USA

lance\_lee@smtp.esl.com

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Date: 20 Jun 1994 22:00:41 GMT

From: ihnp4.ucsd.edu!library.ucla.edu!europa.eng.gtefsd.com!uhog.mit.edu!

news.kei.com!ssd.intel.com!chnews!scorpion.ch.intel.com!jbromley@network.ucsd.edu

To: ham-ant@ucsd.edu

References <2tijhf\$40o@tekadm1.cse.tek.com>, <2tnoq3\$j62@chnews.intel.com>,  
<1994Jun17.140231.18085@arrl.org>

Subject : Re: Antenna radiation pattern charts

In article <1994Jun17.140231.18085@arrl.org>,

Jon Bloom (KE3Z) <jbloom@arrrl.org> wrote:

>Jim Bromley, W5GYJ (jbromley@sedona.intel.com) wrote:

>: After an exhaustive literature search, I have found that directionality  
>: is the property that antennas exhibit of having their main pattern  
>: lobes where the DX isn't.

>A literature search? That's odd...most people discover this principle  
>empirically. :-)

>Jon Bloom KE3Z   jbloom@arrrl.org

Well, either way it's \*literally\* exhausting.  
Followups to rec.radio.amateur.yuck.yuck.yuck

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Date: 20 Jun 1994 16:31:19 -0600

From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!spool.mu.edu!mnemosyne.cs.du.edu!  
nyx10.cs.du.edu!not-for-mail@network.ucsd.edu

To: ham-ant@ucsd.edu

References <edh.771252569@hpuerca>, <2ta0tb\$1gb@ornews.intel.com>,  
<1994Jun17.173201.29854@kocrsv01.delcoelect.com>

Subject : Re: Ringos and J-Poles (was: Newbie Continues Pondering J-Poles)

Ahhh...but when the bottom of the "J" is no longer there, then what do  
we call the antenna??? An "I" pole perhaps? Maybe just a pole antenna.

;-)

--

Bill Hester, Ham Radio N0LAJ, Denver CO., USA - N0LAJ@W0LJF.#NECO.CO.USA.NOAM  
Please route replies to: whester@nyx.cs.du.edu or uunet!nyx!whester  
Public Access Unix @ University of Denver, Denver Colorado USA  
(no official affiliation with the above university)

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End of Ham-Ant Digest V94 #195

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